

REMARKS

Applicants submit this Reply in response to the final Office Action mailed July 21, 2007. Claims 33-69 are currently pending, of which claims 33, 47, 61, 63, 64, and 68 are independent. In the final Office Action, the Examiner rejected claims 33-36, 38-50, and 52-69 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0032424 ("Judd et al.") in view of U.S. Patent No. 7,203,519 ("Ylitalo").¹ The Examiner rejected claims 37 and 51 under 35 U.S.C. § 103(a) as being unpatentable over Judd et al. and Ylitalo further in view of U.S. Patent No. 7,257,425 ("Wang et al."). In this Reply, Applicants have amended each of the independent claims 33, 47, 61, 63, 64, and 68 to round out the protection of the invention to which they are entitled. Applicants respectfully traverse the pending rejections and request reconsideration of the application, as presently amended.²

Rejections Under 35 U.S.C. § 103(a)

Applicants respectfully traverse the Section 103(a) rejections of claims 33-69. To establish a *prima facie* case of obviousness, "All Claim Limitations Must Be Considered." M.P.E.P. § 2143.03 (8th ed., rev. 6, Sept. 2007). More specifically, the M.P.E.P. requires that "[a]ll words in a claim must be considered in judging the

¹ Paragraph 4 of the July 21, 2008, final Office Action appears to contain a typographical error. In this paragraph, the Office Action rejected claims 33-36, 38-54, and 52-69; claims 37 and 51 were separately rejected at paragraph 5 of the Office Action. To avoid overlapping ranges of rejected claims, Applicants believe that the Examiner intended to reject claims 38-~~50~~ in paragraph 4 rather than claims 38-~~54~~ as listed in the final Office Action.

² The pending Office Action contains a number of statements reflecting characterizations of the specification, claims, and related art. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

patentability of that claim against the prior art." *Id.* (quoting In re Wilson, 424 F.2d 1382, 1385 (CCPA 1970)). Applicants submit that a *prima facie* case of obviousness has not been established for at least the reason that the cited art, whether taken alone or in combination, fails to teach or suggest every element recited in Applicants' amended independent claims 33, 47, 61, 63, 64, and 68, from which pending claims 34-46, 48-60, 62, 65-67, and 69 depend.

Applicants submit that the cited art, whether taken alone or in combination, fails to disclose or suggest at least a step of receiving, or an interface configured to receive, "a data signal and a control signal on the same communication link", the data signal corresponding to one or more digital signals to be processed in the antenna unit and the control signal including information indicating at least one of the weighting coefficients applied by the modules for weighting digital signals," as required by each of Applicants' amended independent claims 33, 47, 61, 63, 64, and 68.

In the final Office Action dated July 21, 2008, the Examiner acknowledged that "Judd et al. fails to disclose at least one module for weighting digital signals, the at least one module configured to apply at least a weighting coefficient to a digital signal; and an interface configured to receive information indicating at least one of the weighting coefficients applied by the modules for weighting digital signals, wherein the weighting coefficients applied by the modules for weighting digital signals determine the radiation characteristics of the antenna." Final Office Action dated July 21, 2008, at 5; *see also* final Office Action dated July 21, 2008, at 3 (acknowledging that Judd et al. fails to disclose, *inter alia*, "receiving, at the antenna unit, information indicating at least one of the weighting coefficients applied by the modules for weighting digital signals").

Applicants submit that Ylitalo fails to remedy the above-noted deficiencies of Judd et al. relative to amended independent claims 33, 47, 61, 63, 64, and 68. Ylitalo discloses a weighting means 306 (Figure 3), such that "each separate digital sampled signal is multiplied with a weighting coefficient of the antenna element, usually in complex format, in weighting means 306." Ylitalo, col. 10, lines 4-7. The weighting coefficients in the weighting means 306 are determined based on measurements of a received signal, such as input angles and delay of the received signal. *See, e.g.,* Ylitalo, col. 10, ll. 9-13. A receiver 322 performs the signal measurements and communicates the measurements to a control block 320. *Id.*; *see also* FIG. 3. The control block 320 receives the measurements from the receiver 322 and sends control signals to the weighting means 306 to control its operation. *See, e.g.,* Ylitalo, FIG. 3 and col. 10, ll. 13-18.

Ylitalo also discloses "a modulation block 304, which modulates the carrier wave with a data signal containing the desired information in accordance with the selected modulation method." Ylitalo, col. 9, ll. 39-42. Data signals are processed by the modulator block 304 (*see, e.g.,* Ylitalo, col. 9, l. 42 – col. 10, l. 3) and then forwarded to the weighting means 306. *See, e.g.,* Ylitalo, FIG. 3. The weighting means 306 in Ylitalo receives the control signals from the control block 320 and the data signals from the modulator block 304 via separate communication links. *See, e.g.,* Ylitalo, FIG. 3 (showing a bidirectional communication link between the control block 320 and the weighting means 306 and a separate unidirectional communication link from the modulator block 304 to the weighting means 306).

As discussed above, the weighting means 306 in Ylitalo receives data and control signals over different communication links connected to the modulation block 304 and control block 320, respectively. See, e.g., Ylitalo, FIG. 3 (showing the separate bidirectional and unidirectional communication links to the weighting means 306 for control and data signals). Because Ylitalo employs separate communication links for the data and control signals sent to the weighting module 306, Ylitalo teaches away from using "a data signal and a control signal on the same communication link, the data signal corresponding to one or more digital signals to be processed in the antenna unit and the control signal including information indicating at least one of the weighting coefficients applied by the modules for weighting digital signals," as required by each of Applicants' amended independent claims 33, 47, 61, 63, 64, and 68.

In summary, Applicants' pending claims 33-36, 38-50, and 52-69, as presently amended, are allowable over the art of record for at least the reason that the Examiner's asserted combination of Judd et al. and Ylitalo fails to teach or suggest at least "receiving . . . a data signal and a control signal on the same communication link, the data signal corresponding to one or more digital signals to be processed in the antenna unit and the control signal including information indicating at least one of the weighting coefficients applied by the modules for weighting digital signals," as recited in amended independent claim 33. Applicants' amended independent claims 47, 61, 63, 64, and 68, although different in scope from amended independent claim 33, recite similar subject matter and are therefore allowable for at least the same reasons. Dependent claims 34-46, 48-60, 62, 65-67, and 69 depend on independent claims 33, 47, 61, 63, 64, and

68 and are also allowable for at least the same reasons, notwithstanding the additional reference that the Examiner cited against dependent claims 37 and 51.

Conclusion

The preceding remarks are based only on the arguments in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding remarks in favor of patentability are advanced without prejudice to other possible bases of patentability.

Applicants respectfully request that this Reply After Final under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 33-69 in condition for allowance. Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of this Reply would allow Applicants to respond to the final rejections and place the application in condition for allowance. Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner continue to dispute the patentability of the pending claims.

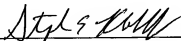
In view of the foregoing remarks, Applicants submit that this claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Reply, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the

pending claims. Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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